Ontario's Advanced Manufacturing Industry





Ontario has a strong and diverse manufacturing sector that includes automotive, telecommunications, computers, electronics, aerospace, chemicals, plastics, transportation and food processing—and they drive the province's advanced manufacturing technologies sub-sector.

Every effort has been made to ensure the accuracy of the information in this publication at the time of writing; however, the programs referred to and the data cited are subject to change.

All figures are in US dollars unless otherwise noted. The exchange rate used is based on the Bank of Canada's annual average for 2004.

Cdn 1.00 = US 0.769

Ontario's

Advanced Manufacturing Industry

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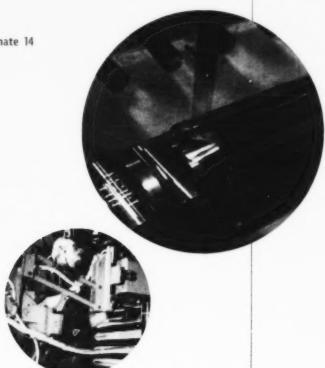
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Advanced Manufacturing:

The Business Case for Ontario

If you're an advanced manufacturer, here's the abridged version of what you need to know about Ontario—and why it's the place you want to be.

We're Canada's largest province (our equivalent of a U.S. state):

- Our population is 12+ million— 73,000 work in the advanced manufacturing and machinery industry
- We're well-educated—56% of us have post-secondary education, compared to 37% in the U.S.
- Our business costs are competitive.

We're home to Canada's corporate and banking headquarters, and we have:

- the largest number of multinational operations in Canada
- an economy that's outpacing that of the U.K., France, Germany and Japan
- · low inflation
- · a favourable exchange rate.

some of the most attractive R&D incentives anywhere." Robert Schad President and CEO

HUSKY INJECTION

MOLDING SYSTEMS

province gives us access to highly skilled engineers and

"Husky develops and manu-

factures the injection molding

industry's most comprehensive

range of equipment, including

machines, molds, hot runners and robots. We are recognized

as a leading innovator, thanks

to our commitment to R&D.

Innovation has been crucial

to our success since the early

1950s, when we developed our first breakthrough technol-

ogy. The main portion of our

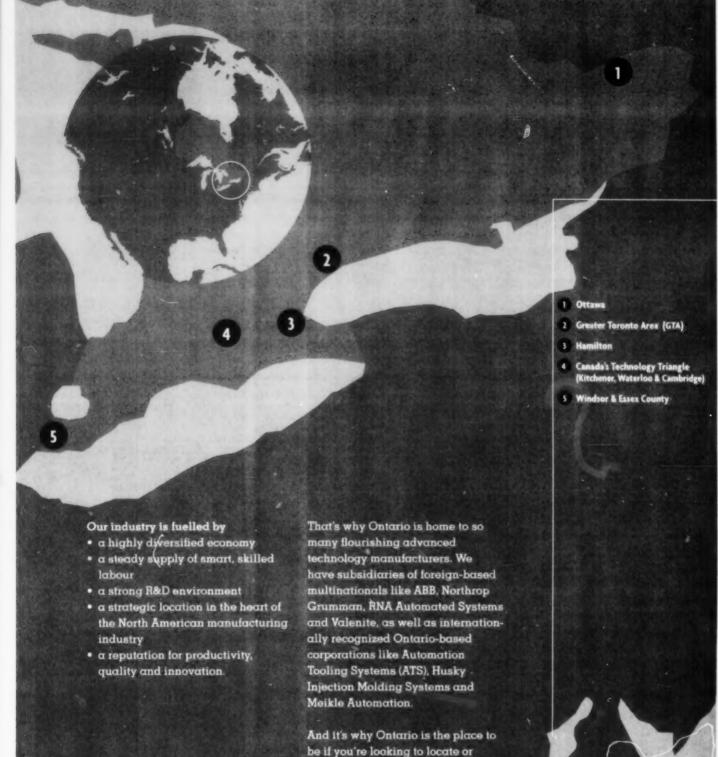
global R&D is conducted at our facilities in Bolton, Ontario. The



And advanced manufacturing is BIG business in Ontario. We've been building machinery and systems for more than 150 years.

Our advanced manufacturing industry

- includes makers of components, assemblies and systems
- encompasses innovative applications of leading-edge computer numeric control (CNC), computer-integrated manufacturing (CIM), robotics, automation and visioning systems, and advanced methodologies such as lean manufacturing
- benefits from the province's broad manufacturing base and strong local and regional markets
- is experienced in meeting a wide range of customer needs across North America and around the world
- · is clustered in five main centres:
 - Ottawa
 - Greater Toronto Area (GTA)
 - Hamilton
 - Canada's Technology Triangle
 (Kitchener, Waterloo & Cambridge)
 - Windsor & Essex County



expand your business, conduct cutting-edge R&D or invest in one of the world's great advanced manufacturing industries.



Employee health care benefits cost Ontario manufacturers about half as much as their U.S. counterparts—6.8% versus 13.2% of wages. In Ontario, services such as doctor's fees, tests and hospital stays are paid through the public health system.

In 1998, German-based RNA Automated Systems—the world's largest company specializing in the manufacture of vibratory feeding systems for automated assembly—was hoping to establish a strong foothold in the North American market. After carefully evaluating locations in the U.S. and Canada, RNA chose the Greater Toronto Area (GTA) as the site for its North American manufacturing and service facility. "The GTA offered everything we needed," says RNA Automated Systems General Manager, Rick DeJong, "including a hard-working, creative workforce with the right skill set, competitive business costs, an excellent transportation infrastructure—and the world's largest process machinery market right next door." RNA opened its North American facility in September 2000, and within a year it moved to a larger plant. That was just before the worldwide economic downturn of 2002-2003, but RNA continued to maintain its sales and attract a growing list of clients, including ATS, Philips Lighting, GN Packaging and Timken U.S. Corporation. By spring 2004, business was booming—and RNA was gearing up for another expansion.



Smart, Skilled and Ready to Work

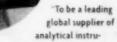
Advanced manufacturing demands highly skilled workers, and ours are among the best in the world.

What's more, we produce a steady pipeline of industry-ready workers, thanks to a well-established education infrastructure that includes:

- 44 universities and colleges with thousands of students enrolled in degree and certificate programs in mechanical, industrial, materials, electrical, computer and systems engineering
- an extensive and focused apprenticeship and co-op network
- industry participation in shaping programs.

As well, Ontario's manufacturing workers are:

- dependable—on average, manufacturing workers stay with a company for nine years
- wage-competitive—the average salary for a tool and die maker is US \$39,200 a year in Ontario, compared to US \$44,200 in Michigan; a materials handler in Ontario makes US \$36,750 a year, compared to US \$42,640 in Grand Rapids, Michigan.



ments and technology solutions requires us to attract and retain experienced employ-

We're fortunate to have access to a pool of highly skilled and educated workers in Ontario. We're able to recruit them locally—and from around the world—and keep them because of the career growth we're able to provide."

Andy Boorn President MDS SCIEX



Spotlight on...

Ford Centre for Excellence in Manufacturing

New government programs will increase the number of apprentices in high-demand areas to 26,000 annually by 2007-2008.

Ontario's advanced manufacturing industry is booming and that's creating a big demand for highly skilled workers. The Ford Centre for Excellence in Manufacturing at St.

Clair College in Windsor is responding with a teaching facility that's unique to North America. The \$30 million, 100,000 sq. ft. facility has shop-floor labs filled with state-of-the-art equipment, including CNC machines, Axis machines, rapid prototyping, wire EDM, high-end CAD/CAM software and an industrial automation line. It can accommodate 1,300 full-time, part-time and apprenticeship students. Incorporating the best practices from industry, the Centre has been designed to move the students from classroom to industrial setting seamlessly, training them in everything from automotive product design to tool and die making to robotics. "This world-class facility is making a tremendous difference in the quality and level of training we can provide to students interested in careers in advanced manufacturing," says Michael Vourakes, Vice President Academic, St. Clair College.





The Ontario Government's new Apprenticeship Training Tax Credit refunds 25% of wages or salaries of eligible apprentices for the first 36 months of the training program to a maximum value of Cdn \$15,000.

Spotlight on...

ATS Automation Tooling Systems Inc.

ATS Automation Tooling Systems Inc. is the world's leading industrial automated manufacturing and test systems company with a well-earned reputation for innovation in the design and production of specialized factory-based automation systems. Less well known—but crucial to its success—is how the Cambridge. Ontario-based company is leading the way when it comes to recruiting and retaining highly skilled workers with its ATS Apprenticeship Program. The four-year, 8.000-hour company-designed skilled trades training program is delivered in partnership with the Ontario government and nearby Conestoga College. It combines work at ATS and classroom study at the College. "Developing our own talent has worked very well for us," says ATS President and CEO Ron Jutras, who notes that, thanks to the program, ATS has its pick of top automation apprentices who have been trained in skills unique to the company and who help to fuel the company's growth. ATS employs 4,000 workers in 26 locations around the world, and had revenues of close to \$510 million in 2003. The company's clients include many of the world's foremost manufacturers in areas as diverse as automotive. telecommunications, computers and health care.



An Innovative Environment

Research and testing are crucial to the successful development and production of advanced manufacturing technologies and products. And here again, Ontario delivers.

We've got leading minds, world-class research facilities and a government that has made research and development a priority—and that makes Ontario THE place to be for R&D.

Our R&D infrastructure includes:

- thousands of top-notch researchers
- 30 specialized research centres where industry innovations are tested and refined
- Materials and Manufacturing
 Ontario (MMO)—a division of
 Ontario Centres of Excellence
 Inc.—which works with industry and university and college
 research centres to move new
 products and technologies from
 the lab to the marketplace.

Ontario also offers some of the most generous R&D incentives in the world.

- Companies conducting R&D in Ontario earn a tax credit on every dollar they spend on eligible R&D, including capital equipment and overhead, neither of which is eligible for U.S. federal tax credits.
- R&D deductions can be carried forward indefinitely.
- An Ontario corporation can claim R&D tax incentives even if its R&D costs are covered by a foreign corporation or government.

We're actively commercializing our ground-breaking science. We have incubators, research parks and technology transfer offices throughout the province. And the Ontario government has committed \$48 million over four years to help public research institutions and researchers attract pre-seed and seed investment.

Dr. Vladimir Krstic
Director
CENTRE FOR MANUFACTURING
OF ADVANCED
CERAMICS AND
NANOMATERIALS

"Nearly every industry is

demanding high-performance materials to help improve productivity and efficiency, and

the Centre for Manufacturing

Nanomaterials (CMACN) aims to capitalize on this growing field. CMACN is the first centre

of its kind in Canada to focus

and training in the expanding

three-fold. One, to help indus-

into production in a timely and

commercially viable way. Two,

to produce a new generation of technologists, engineers and

scientists with unparalleled

skills in developing advanced

ceramics and nanomaterials.

industry."

And three, to position Ontario as a leader in this emerging

try with its need to get R&D

field of advanced materials manufacturing. Our goals are

on research, development

of Advanced Ceramics and





More Costs Qualify for Tax Credits In Ontario

	Ontario	United States	
Wages and salaries	1	1	
Capital equipment	1		
Materials	1	✓	
Overhead	✓		
Contract expenses	✓	65% to 75%	

Innovation Incentives

for Large Manufacturers (public, private or foreign-owned)

		R&D Expenditures	R&D Expenditures at eligible Ontario research institutes	Non-R&D Expenditures
Gross expenditures		\$100.00	\$100.00	\$100.00
Ontario—20% OBRI Ta	x Credit ²		(20.00)	
Federal investment ta	x credit—20%	(20.00)	(16.00)	
Tax deduction ³	\$80 x 34.12% \$64 x 34.12% \$100 x 34.12%	(27.30)	(21.84)	(34.12)
Ontario exemption of federal investment tax credit	\$20 x 12.0% \$16 x 12.0%	(2.40)	(1.92)	
After-tax cost of \$100 e	xpenditure	\$50.30	\$40.24	\$65.88

Mining **Technologies** International Inc. (MTI) is a manufacturer and supplier of quality mining equipment and consumable products. From our three Ontario-based manufacturing facilities we're able to service underground and surface mining operations around the globe. Our location in Northern Ontario has played a large part in our continued market expansion and growth by giving us access to a highly skilled and innovative workforce, leading-edge research facilities, competitive business costs and excellent infrastructure to get our

Robert Lipic
President
MINING TECHNOLOGIES
INTERNATIONAL

equipment to market."

Provincial and federal tax credits can cut the after-tax cost of a \$100 R&D expenditure to \$40.24.

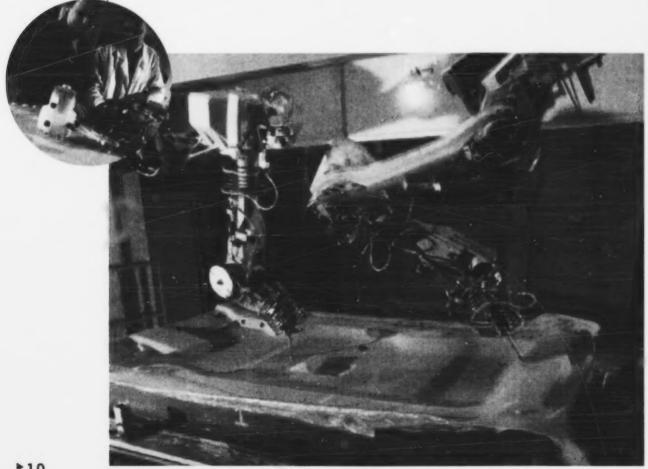
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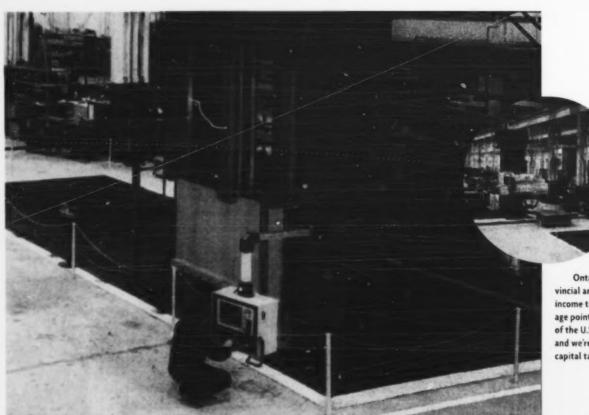
- Eligible Ontario research institutes include universities, colleges of applied arts and technology, research hospitals and other entities in Ontario.
- 2. The 20% refundable Ontario Business-Research Institute Tax Credit (OBRITC).
- 3. Tax rates for manufacturers (2004): Federal 22.12% plus Ontario 12.0% = Total 34.12%

Spotlight on...

Ontario Centres of Excellence Inc. - MMO

When auto parts maker Meritor Suspension Systems Company (MSSC) wanted to improve its production process, it turned to Materials and Manufacturing Ontario (MMO) for help. Through MMO-funded collaboration, MSSC worked with McMaster University researchers to develop an improved process that added high-quality features to its main product line and significantly reduced production costs. A division of Ontario Centres of Excellence Inc., MMO promotes partnerships between industry and academic researchers and their goal is to commercialize innovative technology. And it's been highly successful. Since its start in 1987, close to 600 companies and 2,400 researchers have participated in MMO projects that have resulted in hundreds of new technology licences and dozens of new companies. "We have some of the best researchers in the world here in Ontario," says Bob Civak, MMO's Director of Commercialization and Development. "Our goal is to move their research from the lab to the marketplace quickly—and ensure that Ontario industry stays at the leading edge."

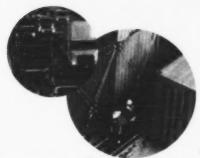




Ontario's combined provincial and federal corporate income tax rate is four percentage points below the average of the U.S. Great Lakes states and we're phasing out capital tax.

Spotlight on... Dieffenbacher North America

It's full speed ahead for Windsor-based Dieffenbacher North America, a leader in the manufacture of hydraulic press systems and complete plants for the wood, plastics, metal and rubber industries. Established in 1983— the first international subsidiary of a German-based firm founded in 1847—Dieffenbacher North America enjoyed steady growth throughout the 80s and 90s. In 1998, the company completed construction of a 50,000 sq. ft. manufacturing plant and two years later added a 4,200 sq. ft. parts warehouse. Further expansion is planned. "Windsor has proved to be the right spot for us," says General Sales Manager Manfred Bruemmer. "It's situated in the industrial heartland, close to the U.S. border, with an excellent transportation infrastructure. It also offers us a skilled workforce and competitive business costs."



A Strategic Location

With just-in-time delivery the standard, location is critical—and Ontario's is ideal. In fact, for advanced manufacturers eager to enter the U.S. market, Ontario is the perfect springboard.

Among the advantages:

- We're part of a huge (420 million people), affluent (\$12.3 trillion GDP) region—where products move freely across borders
- Our advanced manufacturers have easy access to the U.S. market.

Our transportation infrastructure is extensive, sophisticated and integrated with the U.S.

- Our highway network is linked to U.S. routes at 10 border crossings, and railway lines meet the U.S. at five crossings.
- Ontario has three international airports; the largest is Toronto's Pearson International, where more than 65 airlines provide daily service to 43 cities in the U.S. and 42 cities abroad.
- The Great Lakes St. Lawrence Seaway, accessed via 40 provincial and interstate highways and nearly 30 railway companies, provides passage for large ocean-going vessels.

Michael J. Beneteau CEO CENTERLINE (WINDSOR) LIMITED

"From modest beginnings in 1957, we've grown to become a

premier supplier of innovative and cost-effective welding and

metal fabricating solutions for

a who's who of clients in the

automotive, mass transit and aerospace industries. Windsor,

Ontario has proved to be the ideal location for us. offering

a skilled and loyal workforce.

competitive business costs and a central location that allows

us convenient and quick access

to our customers. Add to that

a wonderful quality of life and

it's easy to see why we've never

looked back."









A Positive Investment Climate

"Founded in 1959 Valiant has remained headquartered in Windsor, Ontario. By seizing opportunities to innovate, Valiant has become a leading supplier of technology and tooling to the automotive, aerospace, construction and forestry industries. Ontario offers a highly educated and skilled workforce, a location in the centre of the automotive industry, competitive business costs and a transportation infrastructure that enables us to serve our customers efficiently. Ontario truly has

Gino Longo
Vice President Business
Development
VALIANT
MACHINE
8 TOOL

INC

become a hub for advanced manufacturers like us."

Ontario is committed to staying at the leading edge in advanced manufacturing—and we've taken all the necessary steps to help companies maximize their potential.

In addition to offering smart, skilled workers and an innovative environment, you'll find we're cost competitive when it comes to:

- · wages and benefits
- · payroll tax rates
- · corporate tax rates
- · utility costs
- · real estate.

What's more, we make it possible for companies to get up and running quickly because all the necessary infrastructure is in place and we work hard to fast track approvals.

The bottom line? Ontario is uniquely equipped to meet the needs of the fast-paced advanced manufacturing industry. We have the people. The technology. The vision. The location.

That's why we're a hub for advanced manufacturing—and the place you want to be.





International firms establishing or expanding operations in Ontario can transfer key overseas personnel—and spouses can apply for their own work permits. This cannot be done in many countries.

Spotlight on...
Thermo Electron

When Massachusetts-based Thermo Electron Corporation, which is the world leader

in analytical instruments, was looking to expand its laboratory automation capabilities, it found what it needed in Toronto-based CRS Robotics. CRS is a world leader in designing and manufacturing ultra-high-performance software and mover robotics, and in 2002 it became part of the Thermo family. Now known as the Laboratory Automation and Integration part of Thermo, its advanced technologies enable life science companies to bring life-saving drugs to market more quickly and cost-effectively—and with greater certainty. Its customers include some of the largest pharmaceutical, biotechnological and proteomics companies in the world. "In today's competitive drug-discovery marketplace, technology that allows for high through-put and ease of use is crucial to bringing drugs to market faster and more cost-effectively," explains Thermo Electron CEO Marijn Dekkers. "Our customers rely on the integrated systems that CRS has brought to Thermo's portfolio of laboratory automation products," he adds, noting that the business remains located in Toronto, where it has access to highly educated researchers and workers, competitive business costs and a central location.

We can help

Looking for a place to locate or expand your advanced manufacturing business? Let us help you with

- overview information on Ontario's economy and business climate
- province-wide site searching of available industrial land and building
- comprehensive profiles of Ontario municipalities
- coordination of site selection and community visits throughout the province
- contacts with federal, provincial and municipal officials, as well as utilities, transportation firms and business facilitators.



The 2003 World Investment Report ranks Canada as a front-runner for foreign direct investment. Special thanks to the following organizations for providing photos:

ATS Automation Tooling Systems Inc.

Centre for Manufacturing of Advanced Ceramics and Nanomaterials

Centerline (Windsor) Limited

Dieffenbacher North America

Ford Centre for Excellence in Manufacturing

Husky Injection Molding Systems

MDS Sciex

Mining Technologies International

RNA Automated Systems
Thermo Electron Corporation
Valiant Machine & Tool Inc.

Ontario Centres of Excellence Inc. - MMO



For more information about investment opportunities in Ontario, please call us at:

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